DOCUMENT RESUME

ED 200 739 CE 028 425

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TITLE Techniques of Behavior Change: A Review of Theories and Research. Final Report. Product # 1.
INSTITUTION Florida State Univ., Tallahassee. School of Home Economics.
SPONS AGENCY Florida State Dept. of Education, Tallahassee. Div. of Vocational Education.
PUB DATE Jun 80
NOTE 50p.; For related documents see CE 028 424-429.

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Adult Vocational Education; *Attitude Change; *Behavioral Science Research; *Behavior Change; Change Strategies; *Educational Research; Postsecondary Education; Psychological Studies; Psychology; Secondary Education; Sex Bias; Sex Discrimination; *Sex Fairness; Social Psychology; Theories; *Vocational Education

ABSTRACT

This review of theories and research relating to attitude and behavior change is organized according to five different theoretical approaches to the understanding and changing of attitudes. Selected because they seemed to provide the basis for research on how attitudes and accompanying behaviors can be changed and empirical evidence on what works and what does not, the theories, outlined by Kamper and Glostein (1975), are (1) learning approaches, including operant conditioning, classical conditioning, and Yale program methods; (2) cognitive approaches, including Gestalt and consistency (both cognitive integration and cognitive dissonance theory) methods; (3) functional approaches, including Katz' functional theory and Ellis' rational-emotional theory; (4) social influence approaches, including reference group and reference individual methods; and (5) structure-process-attitude intervention. For each approach, the theory is reviewed briefly and selected research relating to that approach is summarized. A final section discussing implication of the research develops a series of general change techniques which are applicable to the implementation of planned attitude change--educational and sex equity--mandated by implementation of regulations of Title IX and Vocational Education Amendments of 1976. (YLB)

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ED200739

FINAL REPORT
Project No. DVE 9-1C16
Product #1

TECHNIQUES OF BEHAVIOR CHANGE: A REVIEW OF THEORIES AND RESEARCH

June 1980

Florida Department of Education
Division of Vocational Education
Tallahassee, Florida 32301

CE028425

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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Techniques of Behavior Change:
A Review of Theories and Research

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The project reported herein was conducted pursuant to a grant from the Division of Vocational Education, Florida Department of Education. Contractors undertaking such projects are encouraged to express freely their professional judgements in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent the official position or policy of the Florida Department of Education.

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The greatest revolution of
our generation is the discovery
that human beings, by changing
the inner attitudes of their
minds, can change the outer
aspects of their lives.

WILLIAM JAMES

Introduction

Benjamin Disraeli once said, "...in a progressive country, change is constant." In the United States, change is inevitable, and certainly is a constant shifting and flowing of events. Some of this change is spontaneous, a result of living in a fast-paced society, while some change is planned, and often occurs as a result of decisions arrived at after careful study. An example of planned change is the set of behaviors and tasks set forth by certain pieces of legislation. The type of change of concern here is the latter type, which for the purposes of this paper will be limited to consideration of Title VI of the 1964 Civil Rights Act, Title IX of the 1972 Educational Amendments, and the Vocational Educational Amendments of 1976 relating to the provision of educational and sex equity within vocational education. This represents one of the planned changes which impacts our daily lives.

The purpose is to explore planned change, especially

the change of attitudes, behaviors, beliefs and opinions. In particular, aspects of change related to the implementation of educational and sex equity as provided for in the legislation cited above will be emphasized.

In March, 1979, the Department of Health, Education and Welfare issued a set of final guidelines describing how the Federal Civil Rights laws apply to federally assisted vocational education programs. The guidelines give vocational schools, and state agencies administering them, guidance on how they can assure that their programs are non-discriminatory on the basis of race, etc. The guidelines also describe requirements in several areas, including admission, counseling, curricula, placement, and employment. For example, under the guidelines, counselors cannot direct women exclusively to traditionally female courses, such as home economics or secretarial training, without considering their skills and interests. Faculty and staff employment, including salaries, must conform to civil rights statutes. Persons must be hired, paid, and assigned to classes or duties without regard to their race, national origin, sex, or handicap, unless such action is necessary to overcome the effects of past discrimination.

Compliance with these guidelines may involve changes in attitude as well as changes in behvaior. Because of the legal necessity of implementing these guidelines, an examination of ways in which attitude and behavior change will be presented, and, based on the results of research in this area, the most effective and efficient methods of planned change will be identified and recommendations

made for incorporating these methods into workshops and seminars for the purpose of facilitating changes in both behavior and attitude toward educational and sex equity.

Planned change has been defined by Lippitt as "change which derives from a purposeful decision to effect improvements in a personality system or social system which is achieved with the help of professional guidance" (1958, p. vi). The two key points here are the purposeful decision that change should be made, and the achievement of that desired change through professional guidance -- in this case, the materials developed under contract by the staff of the Vocational Education Division of the State of Florida.

Throughout history, planned change has been applied with varying degrees of success to effect changes and improvements in social systems. One such master of the persuasive process was Machiavelli, another was Abraham Lincoln. The evolution of an entire social system must begin at a very basic level: by changing the attitudes of the people within that system and gaining their support of the idea presented. Change must originate in the personality systems of the people, and the outward expression of attitudes of an individual form only the visible tip of the psychic iceberg.

Attitudes are generally considered to be predispositions to respond to a particular stimulus in a predictable manner. For example, a positive attitude about the value of good nutrition would probably bring about eating behavior reflecting that attitude. Likewise, a positive attitude about sex equity in vocational programs would probably bring about behavior reflecting this attitude, and might be reflected in a recruitment program for males and

and females into non-traditional preparation programs. Thus, attitudes do very much influence the way a person behaves.

Attitudes are essentially enduring systems of positive or negative evaluations, emotional feelings, and pro or con action tendencies with respect to social objects (Krech, Crutchfield & Ballachey, 1962). In other words, attitude can be either positive or negative, and are evaluations of some thing or some idea, feeling, or behavior (action tendencies). It is generally acceptable to divide the construct of attitude into three components for the purpose of studying attitude and behavior change:

Affect: an evaluation of, liking of or emotional response to a stimulus.

Cognition: beliefs or opinions about, or factual knowledge of a stimulus.

Behavior: overt action directed toward a stimulus (Zimbardo & Ebbesen, 1969).

Thus, in order to elicit an effective attitude change, all of the above components must be altered in order to bring about this change. However, not all components must be changed in a person's overt behavior to bring about a subsequent change in his/her beliefs and attitudes.

Several theories and ideas from the fields of psychology and social-psychology are helpful in understanding how attitudes are formed, how attitudes influence behavior, and how both may be changed.

An overview of the theories will be reviewed here, and examples from the most relevant theories will be given to illustrate how these ideas may be used in facilitating the changes mandated by the implementation of the regulations of Title IX and the Vocational Education Amendments of 1976, in particular, educational and sex equity.

Five different theoretical approaches to the understanding and changing of attitudes, outlined by Kamper and Golstein (1975), were selected for inclusion in this paper. These theories were selected because they seemed to provide the basis for research on how attitudes and accompanying behaviors can be changed, and empirical evidence on what works and what does not work. The five types of theories or approaches include:

1) Learning approaches
   a) Operant conditioning methods
   b) Classical conditioning methods
   c) Yale program methods

2) Cognitive approaches
   a) Gestalt methods
   b) Consistency methods
      1. Cognitive integration theory
      2. Cognitive dissonance theory

3) Functional approaches
   a) Katz' functional theory
   b) Ellis' rational-emotional theory

4) Social influence approaches
   a) Reference group methods
   b) Reference individual methods

5) Structure-process-attitude intervention

Learning approaches maintain that attitudes are learned. Cognitive approaches maintain that attitudes are largely composed of meanings, i.e., how two attitudes are related depends on their meaningful content. The functional approaches view attitudes as developing only if they serve a function for an individual. The social influence approaches assume attitudes are influenced by others with whom a person interacts and identifies. According to the structure approaches, the social structure, which prescribes certain behavioral roles and the process of carrying out these roles, influences that acquisition and stability of attitudes. This approach deals with changing the environment in order to change the person (Kamper and Goldstein, 1975).

The review of the major theories of attitude change will reveal a great variability in the philosophies of theorists in this area. Research studies in this field have their foundations in one or more theories of attitude change. Thus, the majority of the studies attribute attitude change to different theoretical causes, although the treatment performed on the subjects in remarkably similar. In several studies more than one theoretical orientation is evident.

Learning Approaches

The ideas represented by this approach incorporate aspects of both learning and behavior theory (Greenwald, 1968). The particular aspect of learning theory incorporated here is instrumental or operant learning.

Operant conditioning methods

Operant conditioning utilizes instrumental learning. Instrumental learning deals with the pairing of a particular response with a particular stimulus. The pairing takes place as the behavior elicited is rewarded. The reward may be tangible (money) or intangible (a feeling of pleasure for performing a certain behavior). New behaviors can be created through the use of instrumental learning. For example, if one wanted to teach a complex skill to a person, rewards would be given for the successful completion of parts of the skill as it is learned, and as the person becomes more proficient, the reward is given only upon successful performance of the entire skill rather than parts of it. Thus, rewards are paired with specific accomplishments. This same technique could be used to bring about changes in behaviors and attitudes so that when the situation (stimulus) arises, the behavior or attitude which has been previously reinforced will be expressed; thus, the attitude is changed. As pairing of stimulus and response continue, the behavior becomes automatic or habitual, and the person may not be aware of its occurence; thus, the attitude changed becomes stabilized.

The aspect of behavior considered in the learning approach to attitudes is the formation of habits, or activities that one

does so automatically that many times one does not realize the activity is taking place. Smoking is a prime example. Guthrie (1935, p. 139) gave an excellent example from his own experience:

> "Drinking or smoking after years of practice are action systems which can be started by thousands of reminders...I once had a caller to whom I was explaining that the apple I had just finished eating was a splendid device for avoiding a smoke. The caller pointed out that I was at that moment smoking. The habit of lighting a cigarette was so attached to the finish of eating that smoking had started automatically."

How do we acquire habits? Many of our habits are acquired through instrumental learning - by having certain behaviors rewarded on a regular basis so that when the occasion arises, we perform that behavior even when the reward is no longer there. The situation provides a cue -- and we react to that cue automatically. Habits then, are learned behaviors given in response to cues. The behaviors and rewards (at least initially) were then repeated numerous times on various occasions. The reward is instrumental, or an integral part, of the establishment of the behavior.

Some habits are taught overtly -- such as teaching a child to brush his/her teeth each morning. The reward here is parental

praise. Eventually, after many repetitions, the behavior becomes automatic or habitual, and continues even in the absence of continued parental praise. As the person gets up each morning, the teeth brushing becomes a habit and it is usually done without thinking about the activity as it is performed.

An example from vocational education would involve safety practices. As the skills to use a lathe are learned, so are the appropriate safety measures. The reward here is personal safety. After many repetitions of safe use of the tools, safety becomes a habit -- and safety precautions are taken automatically.

Some behaviors are learned because the pleasure or the enjoyment of the activity serves as the reward. As these behaviors, and the associated pleasures, are continually practiced, they become a habit. Smoking, snacking while watching TV, and drinking coffee every morning are examples of behaviors that many people repeat so often that they become habits. Thus, a habit is a behavior that was learned, and has been repeated so many times that whenever the cue is present, the behavior occurs automatically.

Classical conditioning methods

In the past, classical conditioning was distinguished from operant conditioning by psychologists who recognized the importance of the individual's involvement in operant conditioning. Even though this distinction is no longer emphasized, a brief discussion is given here.

How does this classical conditioning apply to the learning of

attitudes? Staats (1968) suggested that an attitude is an affective or emotional response to a stimulus (cue). The pairing of the stimulus (cue) and the response (here, often an emotion or feeling) comes about in much the same way. As a situation arises, certain feelings may be aroused in a person that predispose him to behave in certain ways. These feelings may be positive or negative. As the situation occurs again and again, the same feelings are often engendered so that even thinking about the situation causes the feeling to come forth. Thus, an attitude is formed about the situation. The attitude thus formed may be considered a habit -- the pairing of a situation and an emotional response which precipitates particular kinds of behavior. Further, once a stimulus situation has acquired emotional value, it can serve as a positive or negative reinforcer for further learning.

For example, if a child has grown up in a family atmosphere in which there was love and happiness, he/she probably has a very positive attitude about family life. As a child matures into adulthood, he/she probably feels positive about having a family of his/her own. On the other hand, if an individual experienced disturbed family relations during childhood, he/she may develop a negative attitude about family life, and be hesitant about beginning his/her own family.

Thus, the concept of family could acquire either a positive or negative emotional value, depending on the home environment of the child. As the child grows, this attitude is reinforced through interaction with his family, and the concept of family life

begins to elicit either a positive or negative emotion automatically. This acquired emotional response to the concept of family may then serve as a positive or negative reinforcement for the individual's desire to have a family of his/her own.

A slightly different interpretation of the learning approach to attitude formation is that of Greenwald (1968) who emphasized the cognitive component. Greenwald believed that persuasive communication is a stimulus (cue) to which the individual responds (cognitively and otherwise) by repeating types of responses that have been successful in other situations. Responses thus become paired with the stimulus (cue) resulting in a habit or attitude (a predisposition to behave in a particular way). The formation of new attitudes or the change of established attitudes then, can also occur through the use of persuasive communication. If a new communication is presented and the person has no previous similar situations from which to generate a response, suggestions on the part of the communicator may provide a model for the behavior, and thus bring about the desired response -- a positive attitude about whatever topic is the subject of the persuasive communication.

One example of the effect of a persuasive communication on attitudes is the television commercial. One commercial which advertises "7-UP" attempts to create both positive attitudes toward its product, and negative attitudes toward competing products. The advertisers create a very positive feeling about the clear, clean natural "un" cola, while at the same time, creating negative attitudes

about the other color which is dark and caffeinated. Thus, it appears that one television commercial may be successfully creating both positive and negative attitudes in millions of consumers, a highly effective and efficient method of attitude change in advertisting.

Classical conditioning, then,deals basically with the acquisition of habits (automatic behaviors), opinions, beliefs, and attitudes through learning that a particular cue brings a reward (tangible or intangible). The pairing is then repeated so often that the behavior or attitude becomes a part of the person's characteristic way of behaving, or his personality.

Yale Program Method

The Yale Program method represents a type of learning approach. This technique, from the field of social psychology, was set forth by Carl Hovland, and assumes that man is a rational being who is able to take in and use information properly. This approach further assumes that a person can be motivated to pay attention to a communication, to learn its contents, and to incorporate them into his verbal repertoire of responses when this learning is rewarded. Hovland (1951) proposed that the primary method of attitude change is a formal, structured communication. The impetus of change, according to this theory, is either the actual or anticipated reward for agreeing with the communicator, or else the awareness of the logical and rational necessity for accepting the information and position being communicated. Thus, this approach does not stress the role of reward as does the learning-

behavior theory. Although rewards may be used to change attitudes, the emphasis here is on the assumption that man is a rational being, and if he is given information as to why he should change his attitudes and behaviors, then, depending upon the credibility of the communicator and the logical necessity developed for the need for change, the person may decide to adopt the attitudes and behavior being advocated.

Thus, the learning approaches to attitude change allow for the effect of both internal and external rewards on behavior. Desired behaviors can be elicited through the use of instrumental learning. Behavior responses are paired with a particular stimulus as the desired behaviors are rewarded. A specified attitude is considered changed when, given a particular situation (stimulus), the desired behavior or attitude is expressed.

Cognitive approaches

The cognitive approaches to attitude change deal with the organization of one's perceptions. When an individual is exposed to a new situation, he/she must integrate this new exposure into his/her existing cognitive structures. This integration often requires restructuring of cognitions. It is in the restructuring process that attitudes are changed.

Gestalt methods

Gestalt methods are based on the principle of simplicity, i.e., people tend to organize their cognitions into a framework of maximum uniformity and regularity. Attitudes become a way of simplifying one's perceptions and they serve as a frame of reference for new perceptions.

This frame of reference is a "whole" or "gestalt". The whole is more than just the sum of its parts. Gestalts can be disorganized, incomplete, or unfinished.

Attitudes are discussed in ways which lead to reorganization and a new frame of reference. This is done by finding better "gestalts" or a simpler way of putting several attitudes together.

Consistency methods

The consistency theories postulate a basic "need" for consistency among attitudes or between attitudes and behavior. Most of the theories assume inconsistency produces psychological tension or discomfort. To reduce the tension or discomfort, the individual rearranges his psychological world. Individuals tend to have similar evaluations of cognitive elements which are associated together.

Several consistency theories have been proposed. The original consistency theory was developed by Heider (1958). The cognitive integration theory was proposed by Greenwald (1968). The best known consistency theory, however, the theory of cognitive dissonance, was developed by Festinger in 1957.

The cognitive integration theory (Greenwald, 1968) deals with the concepts of information processing and the formation of cognitive structures or ideas. Thus, in forming attitudes about something, a person takes in information from the environment, processes it in a way so as to make sense out of the information, and then places this information into existing cognitive organization or structure.

When totally new information is introduced, and the person has no existing structure to relate it to, he/she must revise his/her thoughts and understandings (cognitive structures) so he/she can make sense of the new concepts being presented. The formation of attitudes, then, would occur as a function of taking information and making sense of it -- but the information would be more affective -- dealing with feelings rather than facts, or a persons's feelings about the facts.

From this theoretical orientation, Ostram and Upshaw (1968) have proposed that changing attitudes includes a perspective analysis or a social judgement. This perspective analysis concerns an individual's assessment of the content of his/her attitude, and his/her self-rating of this attitude. A self-rating of attitude occurs when a person considers his own ideas or feelings about an object relative to the continuum of all possible ideas and feelings about the subject. The overview of all possible attitudes about a subject is called the perspective, or the perceived extremes in points of view held by other people.

Attitude change comes about by introducing the person to a new perspective -- to a wider view of the possible attitudes about the subject. When the person is introduced to a new perspective about a topic, he/she may modify his/her self-rating judgment and, if he/she perceived his/her attitudes to fall on an appropriate place on this new continuum, he/she may attempt to change his/her attitude. However, it is possible that he/she will not have to change even within the expanded framework.

Several factors which influence this analysis of social judgment, or the self-rating of one's attitude as compared with other possible attitudes on the subject, have been identified by Janis and Mann (1968). The overall effectiveness of a planned attitude change may be influenced by the utilitarian outcomes to self (what's in it for me), self esteem (how much do I like myself when I hold this attitude), and approval by significant others (will those people that are important to me like me when I have these feelings about the subject). If the person perceives that these benefits are not substantial enough, little or no attitude change will take place.

There have been several studies done in the area of sponsor or communicator credibility. For example, Janis and Gilmore (1965) studied the effect of favorable and unfavorable sponsorship conditions in changing attitudes. In the same study, they also considered incentive (reward) conditions and role playing.

Using a sample of male undergraduates, they found that those subjects who engaged in overt role-playing under the condition of public welfare sponsorship obtained higher attitude change scores than those who did so under conditions of commercial sponsorship. Thus, favorable sponsorship appeared to be markedly more effective in inducing attitude change, irrespective of the size of the accompanying monetary reward. Although Janis and Gilmore stated that the payment of a large versus a small monetary reward had no effect on the amount of attitude change evidenced in their subjects, they also noted that almost of the subjects who received the large amount of money ($20) experienced vague suspicions, guilt or conflict in the experimental situation. Elms and Janis (1965) also investigated the effects of sponsorship, as well as monetary reward and role-playing under conditions of

favorable sponsorship and large reward. However, neither study examined the effect of these factors, favorable sponsorship and monetary incentive, separately, but chose to study the interaction of the factors on attitude change. Both studies found that the amount of reward given to the subjects did not influence the amount of resulting attitude change, as long as the sponsorship condition remained favorable. It is therefore speculated that the factor exerting an overwhelming influence in these studies on attitude change was sponsorship, and not the interaction of the two variables. The same large reward tended to create suspicions, guilt and other interfering responses which produced less attitude change when the role-playing task was sponsored by a distrusted source and was perceived as having a purpose antithetical to one's own values.

Other studies performed in this area of sponsor credibility (e.g., Hovland & Weiss, 1951) are generally supportive of the findings of the above studies. That is, subjects were more likely to change their attitudes in the direction of the communication if they perceived that it came from a trustworthy source with high credibility.

The results of the sponsor credibility studies are consonant with two theories of attitude change: the Yale Program method and the cognitive dissonance theory. The Yale program method, discussed earlier, will be more successful in inducing attitude change if the sponsor is perceived as someone whose affiliations are benign in character and whose intentions are to promote public welfare, than if the sponsor is perceived as someone whose affiliations and purposes

are commercial or exploitative. On the other hand, the cognitive dissonance theory, to be discussed in the following section, predicts more dissonance with the use of small rewards, regardless of the credibility of the sponsor. Therefore, more attitude change will results from role-playing if the sponsor is perceived as having questionable affiliations or purposes than if he/she is perceived as having intentions consonant with the individual's own goals. The reasons for these results will be discussed in the section on cognitive dissonance theory.

Other researchers have explored the effects of differential monetary reward in bringing about attitude change. Cohen (1969) investigated the attitude held by college undergraduates about campus police. Cohen offered varying rewards of $.50, $1.00, $5.00, and $10.00 to undergraduates who would comply with an attitude which was discrepant from their own. Cohen discovered that the lowest incentive was the most effective reward for eliciting attitude change. The apparent reason for this effectiveness of the lowest incentive seems to be related to the cognitive dissonance theory of attitude change which is presented later in this paper.

Kelman (1953) performed a similar sutdy with seventh graders and their opinions on the harmfulness of comic books. He explored the effects of caried incentive levels upon attitude change induced by role-playing (a counfounding variable, as noted above). Kelman found that the greatest amount of attitude change was produced in the

group where subjects were promised a small reward if they agreed with the communicator, but were told that only a small percentage of the class would receive the reward. It was made clear to the subjects that nonconformity was possible and could have certain advantages.

From the studies above, it appears that offering very little reward for attitude change does not necessarily produce little desire to change in subjects. In fact, the smallest rewards were eliciting the largest changes in attitudes. Thus, the magnitude of the reward appears to be inversely related to behavior and attitude change. One can conclude from these studies that attitude change cannot be "bought" -- and that there is more to the changing of habits, attitudes, and behaviors than just providing rewards.

Cognitive dissonance theory. Perhaps the foremost theory in the area of attitude change is Festinger's theory of cognitive dissonance. Festinger proposed that cognition is composed of cognitive elements (bits of knowledge, opinions, or beliefs) which can exist in one of three relationships: a) consonant, b) dissonant, and c) irrelevant. Cognitive dissonance is a drive force which is aroused by the discrepancy between two or more relevant cognitive elements, when one is about an individual's behavior (his/her choice or compliant act) and the other concerns his/her internal or external environment. An unconscious decision made by the individual allows internal dissonance to exist.

Dissonance is more likely to occur in a given situation if the person decides to commit him/herself to some particular course of action

while remaining aware that she/he made the choice, and could choose to do otherwise if she/he so desired. The initial amount of dissonance experienced by the person is a function of the number of reasons (consonant elements) for either complying to external demands or choosing one alternative over another. However, the amount of dissonance actually experienced by the person is a function of the ratio of total dissonant to consonant elements, the relative importance of these elements, and the perceived overlap among them. Thus, if an individual beleives he/she has strong motives or reasons for a response, and/or if he/she has experienced situations, he/she will experience less dissonance.

The greater initial amount of dissonance, the more effort the person will put forth to reduce the dissonance by changing one or more of the dissonant cognitive elements or by adding new consonant elements. For example, an individual can reduce dissonance either by changing his/her behavior, by changing his/her internal envioronment (attitudes and perceptions), or his/her external environment (social pressure). Thus, an individual may choose to attempt to revoke the decision or response which was the initial source of the dissonance. She/he may try to lower the importance of the cognitions, or increase the perceived similarity among the elements by searching for or even misperceiving aspects of the information, opinions, or beliefs to make them seem more similar and less dissonant. And, by adding consonant elements in order to change the ratio of dissonant elements

to consonant ones, the individual will be reducing dissonance, and she/he will feel less internal conflict.

The use of varying levels of incentives in modifying attitudes has been interpreted in terms of cognitive dissonance theory. For example, Carlsmith, et al., noted that their subjects changed their attitudes less if they paid large amounts of money. A classic study by Festinger and Carlsmith (1959) explained this phenomenon in terms of the theory of cognitive dissonance.

Festinger and Carlsmith required male undergraduates to perform a long series of boring, monotonous tasks. The subjects were then offered two levels of incentives, $1.00 and $20.00, to tell subsequent groups that the tasks were interesting and enjoyable. The researchers found that the group which was offered the small reward yielded a higher rating on how enjoyable the tasks were on an attitude scale.

Festinger and Carlsmith attributed the results of their research to the amount of dissonance the subjects experienced. By offering a small reward in exchange for essentially lying to another group about the tasks, a great deal of cognitive dissonance was created. The pressure to reduce this dissonance was great, and subjects attempted to reduce the discomfort caused by the dissonance by convincing themselves that the tasks were indeed enjoyable and interesting. Dissonance was reduced, and an attitude change resulted, as indicated by the results of an attitude scale administered at the conclusion of the study.

Very little dissonance was created in the group which was offered

the large monetary reward in exchange for lying to the next set of subjects. This large amount of money awarded to the subjects had not created a set of dissonant relations within the kind of the individual, since they apparently felt they were paid to behave in a certain way. The money seemed to override any twinge of conscience they may have had in lying about the enjoyment of the task. Thus, the need to reduce the very small amount of dissonance created in the situation was virtually eliminated. In other words, Festinger and Carlsmith discovered that when a subject was induced, by offer of a reward, to say something contrary to his private opinion, his opinion tended to change so as to correspond more closely with what he had said under conditions of low reward. The greater the reward offered (beyond what was necessary to elicit the behavior), the smaller was the effect.

Scott (1959) also attempted to change attitudes using monetary incentives within the framework of the learning-behavior theory. He had undergraduate subjects debate issues which were opposite neutral, or the same as their own opinions. The winners of the debate were to be awarded monetary prizes. Scott found that the winners of the debate tended to change their personal attitudes more toward the side they represented in the debate. He also found that the effects of response reinforcement on attitude change were not necessarily transitory, but were preserved up to periods of at least ten days. Scott also noted that response reinforcement was an effective method of attitude change, either in strengthening previously held attitudes, in changing them, or in creating new ones. Scott concluded that this overall consistency of a person's opinions and beliefs was

the critical factor in predicting whether a particular attitude could be changed. Although Scott's results are certainly supportive of the positive effects of monetary reinforcement in eliciting attitude change, his study was confounded by requiring the subjects to debate an issue. Debating is essentially role-playing, a very salient variable in the area of attitude change which is related to other theories of attitude change and will be discussed there.

A study of sponsor credibility whose results were interpreted in terms of cognitive dissonance theory was that done by Zimbardo, Weisenberg, Firestone and Levy (1965) who found that communicator effectiveness operated upon attitude change in the precise manner predicted by the theory of cognitive dissonance. That is, Zimbardo et al.. found that the person must alleviate his own discomfort with the communicator, and in so doing, apparently change his attitudes.

Bem's writings (1970) are also based on the cognitive consistency theories. He believes that individuals move toward greater cognitive consistency with the major values of society, and that attitudes and behaviors are rooted in acquiescence to social norms, not unconcious beliefs. He believes that groups regulate the beliefs, attitudes, and behaviors of their members through the use of social reward and punishment.

Bem's theory of self-perception is directed at public behavior. This approach provides a simpler explanation of what happened in the dissonance experiments. In essence, Bem's theory is a criticism of the cognitive dissonance theory.

Functional Approaches

The functional approaches deal with the question, "Of what use to a person are his attitudes?" These approaches view humans as striving to accomplish certain goals. Attitudes are analyzed in terms of the extent to which the the attitudes facilitate goal accomplishment.

Katz' functional theory.

Katz' theory (1959, 1960) deals with identifying the psychological needs individuals are trying to meet by holding given attitudes. Katz believes attitudes serve four functions: adjustive, ego-defensive, knowledge, and value-expressive. The adjustive function is the development of favorable attitudes toward objects associated with satisfaction. Individuals strive to maximize rewards in their external environment and to minimize penalties. The ego-defensive function allows the individual to protect him/herself from anxiety by doing away with threatening internal and external stimuli. For example, prejudiced attitudes may help sustain an individual's self-concept by maintaining superiority over others. The knowledge function gives meaning to what otherwise would be an unorganized, chaotic world Attitudes help individuals establish predictable, consistent, and stable perceptions of the world. The value-expressive functions of attitudes give positive expressions to an individual's central values and self-concept. This leads to satisfaction.

Katz (1960) pointed out that an individual may not want to change an attitude that has helped him/her to cope. He suggested reducing the threat of change by illustrating how the new

attitude will better serve the function of the old attitude.

Ellis' rational-emotive theory.

Ellis (1962) assumes that most psychological problems are rooted in certain erroneous and destructive attitudes. Ellis identifies eleven irrational ideas from which erroneous and/or destructive attitudes can form (1962, p. 60-88). These irrational ideas include:

1) The idea that it is a dire necessity for an adult human being to be loved or approved by virtually every significant other persons in his community.

2) The idea that one should be thoroughly competent, adequate, and achieving in all possible respects if one is to consider oneself worthwhile.

3) The idea that certain people are bad, wicked, or villanous and that they should be severely blamed and punished for their villainy.

4) The idea that it is awful and catastropic when things are not the way one would very much like them to be.

5) The idea that human unhappiness is externally caused and that people have little or no ability to control their sorrows and disturbances.

6) The idea that if something is or may be dangerous or fearsome one should be terribly concerned about it and should keep dwelling on the possibility of its occurring.

7) The idea that it is easier to avoid than to face certain life difficulties and responsiblities.

8) The ideas that one should be dependent on others and needs someone stronger than oneself on whom to rely.

9) The idea that one's past history is an all-important determiner of one's present behavior and that because something once strongly affected one's life, it should indefinitely have a similar effect.

10) The idea that one should become quite upset over other people's problems and disturbances.

11) The idea that there is invariably a right, precise, and perfect solution to human problems and that it is catastrophic if this perfect solution is not found.

Ellis' theory stresses the negative self-defeating functions which attitudes based on these ideas can serve. One goal of this therapy is to help individuals identify and internalize healthy positive attitudes.

Social influence approaches

The social influence approaches to attitude change view individuals as social beings who are influenced by both the groups to which they belong and the individuals with whom they associate. The influential groups and/or individuals are typically held in high esteem by the individual. Conformity and the need to be accepted are major factors in these approaches.

Reference Group Methods.

Reference groups can be of any group to which an individual belongs or aspires to belong. The impetus for change can be either internal (the individual wants to belong) or external (the group encourages conformity).

One type of reference group method, the group dynamics approach to attitude change, was suggested by Lewin (1947), a social psychologist. This approach, based on a cognitive field-theory orientation, assumes that people are social beings who need other people as a basis for (a) knowing about themselves, (b) determining appropriate responses to environmental demands, and (c) channeling and regulating their current behavior through the operation of group norms. Lewin's basic method of attitude change is identifying a group norm which is discrepant with the individual's attitude or behavior. Thus, the person is a part of a group which holds attitudes or beliefs difference from his/her own. The beliefs of the group, or norm, may be communicated formally or informally. The impetus which forces attitude change in the individual is the pressure toward uniformity which is enhanced with a need to be accepted in the group or a fear of being rejected from it. The emphasis here, then, is the social aspect of a person and her/his need for being a member of a social group. As a person feels that his/her attitudes are different from those of a social group to which he/she wishes to belong. he/she may succumb to peer pressure and change her/his attitudes (or at least the overt behavior associated with those attitudes) to

become an accepted member of the group.

One method of attitude change suggested by this approach is role-playing, which has been studied in a variety of situations. For example, Janis and King (1956) and Janis and King (1954) compared the effectiveness of improvised versus non-improvised role-playing in producing attitude changes. Using a sample of college undergraduates, the researchers discovered that improvised role-playing was a more effective attitude changer than simply listening to a persuasive speech or even reading a prepared speech aloud (non-improvised role-playing). However, the effectiveness of improvised role-playing appeared to depend on how satisfied the subject felt about his/her performance.

Carlsmith, Collins and Helmreich(1966) studied the effects of forced compliance on attitude change with a sample of college undergraduates. They required that the subject adopt a counterattitudinal position by either publicly announcing the position or by privately writing an essary adopting the position. The researchers discovered that both face-to-face role-playing and anonymous essay writing were effective techniques for eliciting attitude changes.

From the above studies, it appears that role-playing attitudes counter to one's own can be a powerful technique in producing attitude change. Research studies have investigated the effect of role-playing in conjunction with other variables which influence attitude change. For example, in the studies reported above by Janis and Gilmore (1965) and Elms and Janis (1965) role playing was examined, as well as

the variables of sponsorship and reward. Findings indicated the role playing to be successful in modifying attitudes. However, since three variables were considered, the effect of role playing is difficult to determine.

Other variables have also been investigated in relation to attitude change within groups. One such variable is the effect of forewarning the subjects about the nature of the communication. Allyn and Festinger(1961) discovered that high school subjects who were not forewarned changed their attitudes more toward the direction of the communication than subjects who were forewarned. Those subjects who were forewarned also frequently said that the communicator appeared to be biased. The results of a study by McGuire and Papagerogis (1962) supported the findings of Allyn and Festinger. They found that sensitizing their audience to counterarguments before presenting a persuasive communication resulted in lessened attitude change.

Watts and Holt (1979) studied the effects of immediate and delayed forewarning on the persistence of opinion change. They found that when the forewarning was presented immediately before the persuasive communication, the subjects changed their opinions less than when the forewarnings were presented one week before the persuasive communication. In fact, the delayed forewarning had the same effect as no forewarning.

In a second study, Watts and Holt (1979) examined the effects of distraction on opinion change. It was found that while distraction

seemed to facilitate opinion change, the changes seemed to decay rapidly. In addition, it appears that subjects participating in opinion change studies under distraction conditions have significantly lower level of comprehension of the content of the message.

Thus, it appears that if one wishes to produce large amounts of attitude change, it would be best to forewarn people of one's intentions to do so at least one week before the change activity takes place. It would appear to be more open and honest than to attempt an attitude change technique surreptitiously.

Several studies have been performed in order to investigate the effects of distraction on attitude change. Festinger and Macoby (1964) proposed that providing a distraction during the communication lowered the audience's resistance to change. They found their undergraduate subjects evidenced more attitude change when an amusing silent film was shown during the presentation of the communication, than if they watched a film of the lecturer they were attending to. Freedman and Sears (1965) also investigated this phenomenon and their findings support the results of Festinger and Macoby. Thus, it appears that if people are distracted while listening to a communication, they will change their attitudes more in the direction of the communication than if they are not distracted. However, they are also less likely to understand completely the content of the communication and are more likely to revert to their former attitudes.

Reference individual methods.

Johnson and Neale (1970) described reference individuals as individuals a person uses as standards to evaluate his/her attitudes, abilities, or current situations. This is often done through identification, the process of taking on the attributes of another. Johnson and Neale (1970) have identified four actions which have impact on attitudes: (1) the expression of accurate understanding, (2) the expression of cooperative intentions, (3) the expression of coldness and anger towards destructive attitudes, and (4) the structuring of client role reversal.

A typical role for reference individuals in attitude change strategies is that of the internal change agent. The importance of the change agent is stressed by Lippitt (o958) in his model of attitude change. This model is discussed in a later section of this paper.

Both reference individuals and reference groups are key factors in any strategy of attitude change. In general, people tend to associate with others with whom they share similar values, beliefs, and attitudes. Individuals tend to be influenced more by people they know and trust than by strangers.

Structure-process-attitude interventions

This approach, suggested by Watson and Johnson (1972), deals with changing the environment in order to change the person. According to this approach, a social system has a certain patter or structure establishing prescribed roles. In the process of carrying out these roles, individuals develop corresponding outlooks, attitudes, and feelings.

A change in the system brings changes in roles, and the changed interaction alters the members' attitudes and feelings. Thus, a social system structure leads to a process of interaction among members which leads to the acquisition of attitudes (Watson & Johnson, 1972)

The relevance of this theory to an attitude change strategy developed for vocational educators is the reminder that each part of the vocational educational system is a system in itself. To be effective, i.e., well received and implemented successfully change strategies must be relevant to each group (e.g., administrators, teachers, students) in the system.

Implications of the Research

After reviewing the above research studies and theoretical positions, it appears that a great many variables influence attitude change. Thus, it is not possible to isolate one variable which consistently elicits large amounts of attitude change. However the manipulation of several variables, such as sponsor credibility, role-playing and response reinforcement, should produce a predictable amount of attitude change.

In attempting to change attitudes, all of the researchers manipulated the behavior of their subjects, and attitude change resulted. Thus, it appears that the behavior change must precede attitude change, a basic tenet of the cognitive dissonance theory. Thus, an attitude change appears to result from an interaction of variables (sponsorship, reward, and role playing). Based on these assumptions, as well as basic theoretical and research foundations, it is possible

to develop a series of general change techniques which are applicable to the implementation of planned attitude change.

One of the major influences in attitude change is the communicator. It is therefore essential that this variable be as conducive to eliciting change as possible. As noted in the research studies of Janis and Gilmore (1965), Elms and Janis (1965), and Hovland and Weiss (1951), communicator effectiveness is directly related to his/her perceived credibility. That is, there will be more attitude change in the direction of the communication if the persuader is perceived as being trustworthy and having expertise in the field. It is interesting to note that it is the perceived, as opposed to the actual, credibility of the sponsor which is an important variable in eliciting attitude change. Thus, one could also assume that other communicator characteristics irrelevant to the topic (appearance, mannerisms. etc.) influence the acceptance of the message.

Based on the theory of cognitive dissonance, one may assume that the more extreme the attitude change requested by the communicator, the more actual change is likely to result. Thus, the greater the discrepancy between the communicator's position and the recipient's initial position, the greater the dissonance created; and, the more dissonance created, the more attitude change occurs. However, as noted above, other facts such as perceptions of communicator affiliations and overall level of consonant relations in the individual's frame of reference also influence the amount of attitude change which may be accounted for within the cognitive dissonance theory.

In the presentation of the issue, it is important that the audience not be forewarned about the nature of the communication (Allyn & Festinger, 1961). And, the presentation of only one side of the issue will result in greater attitude change (McGuire & Papageorgis. 1962).

Many times the audience will resist the communication delivered by the persuader. This is a very normal occurrence as attitudes play a major role in the maintenance of self-esteem and competence. However. this resistance may be significantly lowered if distractors are simultaneously presented with the message (Festinger & Maccoby 1964). The communicator must be extremely careful, though, not to emit cues which could forewarn the audience of the manipulative intent of the communication, as this is likely to increase their resistance to the assimilation of the message (as outlined by the Yale program methods).

Another important factor in eliciting attitude change is response reinforcement. Based on the research on varying incentives (Festinger & Carlsmith, 1959) as well as the theory of cognitive dissonance, it would appear that the fewer intrinsic justifications provided in communication for engaging in the counterattitudinal behavior, the greater the attitude change after actual compliance with the behavior.

Active involvement of the audience with the communication is likely to increse attitude change. This involvement could be in the highly effective form of role-play (Janis & King, 1954). Both the group dynamics approach and the formal attitude change approach postulate

that involvement with the consequences of one's response increases the probability of change and does so more when the communication-recipient discrepancy is greater. Thus, if the communication is tailored to the general characteristics of the audience, and if they are actively involved with the message, more attitude change is likely to occur.

The group dynamics approach of Kurt Lewin has a great many implications for attitude change, particularly concerning the influence of groups in eliciting change. Lewin's theory postulates that an individual's attitudes are strongly influenced by groups to which he/she belongs or wants to belong. The theory also states that an individual is rewarded for conforming to the standards of the group and punished for deviating from them. However, individuals who are most attached to the group are probably least influenced by communications which conflict with group norms.

Lewin's theory also provides a theoretical foundation for the implementation of role-playing as an instrument of attitude change. Audience participation, in the form of discussion and role-playing in a group setting, helps to overcome resistance to the communication and elicits attitude change (Carlsmith, Collins & Helmreich, 1966).

Thus, the influence of groups, in the form of pressure to conform or the need to be accepted, plays an important role in attitude change. This factor could be introduced in the change situation as a characteristic of the communicator (professional affiliation) or through the simultaneous attitude change of an entire group. It is important to note that the group forces may work against the innovator of change,

as well as for him/her.

After attitude change has occurred, it is important to maintain this gain over long periods of time. Research suggests some techniques to prevent the disintegration of this change. Attitude change has been shown to be more persistent over time if the recipient actively participates in, rather than passively receives, the communication. Lewin, in 1947, stated that "a change toward a higher level of group performance is frequently shortlived; after a 'shot in the arm', group life soon returns to the previous level" (p. 6). This phenomenon indicated to Lewin that it did not suffice to simply define the objective of planned change in group performance as the reaching of a different level. He suggested that the permanency of the new level, or the permanency for a desired period, should be included in the objective.

With this belief, Lewin proposed a model for change. He believed a successful change process includes three components: 1) unfreezing (if necessary) the present level, 2) moving to the next level, and 3) freezing group life on the new level (Lewin, 1947, p.34).

Based on those three aspects of successful change -- unfreezing, moving, and freezing -- Lippitt (1958) developed a seven phase model of planned change (Table1). Lippitt's model, which uses group decision making, is a general model for change. It is not a specific implementation strategy; rather it is a base from which implementation strategies can be developed. (See Table 1 next page)

The first phase of planned change is the development of a need for change. This is essentially the unfreezing phase of Lewin's

model. During this stage, Lippitt notes that it is important for the client to have confidence in the possibility of a more desirable state of affiars, and to believe the external help is both available and relevant.

The second phase of planned change is the establishment of a change relationship, and the third phase is the clarification or diagnosis of the client's problem. These phases are often extremely complex. and may involve a great deal of investment on the part of both client and change agent.

The fourth and fifth phases of Lippitt's model of planned chang axe essentially the "moving" aspect of Lewin's model. The fourth phase involves the examination of alternative routes and goals and the establishment of goals and intentions of action. The fifth phase encompasses the transformation of intentions into actual change efforts. It is during these phases that the actual change techniques occur. Thus, upon completion of the fifth phase, the client's attitudes have been successfully manipulated as a function of the many aforementioned variables which influence the effectiveness of the change.

During the sixth phase, the change agent is attmpting to generalize and stabilize the change, or "freeze" it. Effective methods for freezing the attitude at its newly achieved level as positive evaluation and reward.

The seventh and final stage of Lippitt's model of planned change is the achievement of a terminal relationship between client and the change agent. Upon completion of this phase, the attitude change

Table 1

Lippitt's model of planned change

1) The development of a need for change
   a) confidence in the possibility of a more desirable state of affairs
   b) belief that external help is both available and relevant

2) The establishment of a change relationship

3) The clarification or diagnosis of the client's problem

4) The examination of alternative routes and goals
   a) the establishment of goals in intentions of action

5) The transformation of intentions into actual change efforts
   a) actual change techniques implemented
   b) attitude change occurs

6) The generalizability and stabilization of change
   a) through positive evaluation and reward
   b) through changing other levels within the system

7) The achievement of a terminal relationship

elicited in the client is considered permanent, and the change relationship is terminated.

The role of the change agent is a crucial aspect of Lippitt's model. He has found the most effective "change agent" to be a combination of an insider (an individual from within the group or organization seeking to change) and an outsider (an expert/consultant brought in from outside the group or organization).

Lippitt's model was adapted for educational purposes by Havelock (1970). Havelock's Dissemination and Utilization (D & U) model proposes a transfer of messages by various media between resource systems and users. Havelock views the process as having four levels: the individual, the interpersonal, the organization, and the social system. Havelock consider the change agents of education to be the many educators who work for reform at all levels -- school systems, schools, and individual classrooms (1970, p. 1). His D & U model consists of six stages: building a relationship (between change agent and client), diagnosing the problem, acquiring relevant resources, choosing the solution, gaining acceptance, and stabilizing the innovation and generating self-renewal.

The D & U model has been represented by three distinct points of view (1973, p 2140-43). Each of these points of view designates a complete conceptual system within which all of the facts pertinent to D & U can be ordered, and are, therefore, referred to as models. These three models are labeled a) The Problem Solver Model, b) The Research, Development and Diffusion (R,D&D) Model, and c) The Social Interaction Model.

The Problem Solver Model is a general one that could apply to a process inside a single person, a group, an organization, a community, or society as a whole. The problem solvers can be either internal or external change agents. This model has six stages: 1) felt need, 2) articulation as a problem, 3) search for solutions 4) choice of solution, 5) application of solution, and 6) need reduction. If the solution does not result in need reduction, the process is reinitiated and continues until a need-reducing solution is discovered

Another orientation toward the D & U process is the R, D & D process model. This model is represented by those who start from research and deliniate a path toward the consumer. Consumer needs, though implicit, are not prime motivators for the generation of new knowledge in this model. Instead, research is made useful through the process of development. In development, useful products and services are created from the basic theories and data of the research stage. Once the development phase is complete, the knowledge is mass produced and diffused to all the members of society for whom it might be useful. The actual final stage of the model is the adoption of the knowledge by the consumers.

The Social Interaction model emphasizes the diffusion aspect of the R, D & D model. This model stresses the measurement of the movement of messages from person to person and system to system. This model has demonstrated the importance of several factors such as opinion leadership, personal contact, and social integration.

These three models are not theoretically separate entities. Havelock views them as parts of a whole.

The above thoery, research, general change techniques and processes have a great many implications for eliciting attitude change in practically any human population. For the purposes of this proposal, it may be informative to apply these general principles of change to the area of vocational education.

Mann (1971) noted that three incorrect assumptions were often made concerning attitude change within the educational system. The first false assumption is that people can be changed; that they are malleable, even that they may be perfected; and education is one of the principal ways through which people can be changed.

The second incorrect assumption is that people are rational; that they orient themselves toward goals. He notes that it is naive to assume that people use information and calculation to govern their actions. Thus, although people are provided with a great deal of information as a result of their education, they do not necessarily modify their behavior accordingly.

The third false assumption is that people in education share social purposes at some lofty or abstract level. Mann stated that in actuality, there is no unitary set of values or goals on which school personnel agree.

Thus, it appears that the general acceptance of the above assumptions make attitude change within the educational system extremely difficult. For example, a great deal of reform agenda has been proposed for education within the past several years. However, many of the change agents' strategies were grounded in

these false assumptions. The resulting amount and impact of change has thus fallen short of the expectations of the designers of planned change.

It is therefore suggested that the formal attitude change approach is not appropriate for eliciting attitude change among vocational educators, particularly attitude change associated with educational and sex equity.

The entire area of sex-role stereotyping, and resulting sex bias is deeply involved with an individual's own sex role, his/her esteem and philosophy of life. Thus, a great deal of resistance is likely to be encountered by persuaders to change these deeply embedded attitudes.

Considering the above principles of change and the highly emotional area of the change, it is suggested that attitude change in vocational educators be strongly oriented within the framework of the cognitive dissonance theory. An appropriate strategy for changing sexually biased attitudes in vocational education can be developed from Havelock's Dissemination and Utilization model. Although manipulation of many variables of change could possibly contribute to successful attitude change within this population, a salient variable would be role-playing.

References

Allport, G.W. "Attitudes"in C.A. Murchison (Ed) A Handbook of Social Psychology. Worcester, MA: Clark University Press, 1935, pp. 798-844.

Allyn, J. & Festinger, L. The effectiveness of unanticipated persuasion communication. Journal of Abnormal and Social Psychology, 1961, 62, 35-40.

Bem, D. Beliefs, attitudes and human affairs. Belmont, CA: Brooks/Cole Publishing Company, 1970.

Carlsmith, J., Collins, B.E. & Helmrich, R.L. Studies in forced compliance: I. The effect of pressure for compliance on attitude change produced by face-to-face role playing and anonymous essay writing. Journal of Personality and Social Psychology, 1966, 4, 1-13.

Cohen, A.R. An experiment on small rewards for discrepant compliance and attitude change in A.C. Elms (Ed) Role Playing, Reward and Attitude Change. New York: Van Nostrand, 1969, 41-46.

Davidson, R., and Jaccard, J.J. Variables that moderate the attitude-behavior relation: Results of a longitudinal study. Journal of Personality and Social Psychology, 1979, 37, 1364-1374.

Dichter, E. Motivating Human Behavior. New York: McGraw Hill, 1971.

Doob, L.W. The behavior of attitudes. Psychological Review, 1947, 54, 135-156.

Ellis, A. Reason and emotion in psychotherapy. New York: Lyle Stuart, 1962.

Elms, A.C. (Ed) Role playing, reward and attitude change. New York: Van Nostrand, 1969.

Elms, A.C. & Janis, I.L. Counter-norm attitudes induced by consonant versus disconsonant conditions of role-playing. Journal of Experimental Research in Personality, 1965, 1, 50-60.

Festinger, L. & Carlsmith, J.M. Cognitive consequences of forced compliance. Journal of Abnormal and Social Psychology, 1959, 58, 203-210.

Festinger, L. Maccoby, N. On resistance to persuasive communications. Journal of Abnormal and Social Psychology, 1964, 68, 359-366.

Fishbein, M. Attitude and prediction of behavior. In M. Fishbein (Ed.), Readings in attitude theory and measurement. New York: Wiley, 1967.

Fishbein, M. (Ed) Readings in Attitude Theory and Measurement. New York: John Wiley, 1967.

Freedman, J.L. and Sears, D.O. Warning, distraction and resistance to influence. Journal of Personality and Social Psychology, 1965, 1, 262-266.

Greenwald, A.G., Brock, T.C. and Ostrom, T.M. Psychological Foundations of Attitudes. New York: Academic Press, 1968.

Gunn, S.P. Attitude Change and Bogus Pipeline Paradigm. Unpublished Master's Thesis, Florida State University, 1973.

Guthrie, E.R. The psychology of learning. New York: Harper, 1935.

Havelock, R.G. A guide to innovation in education. Ann Arbor, MI: Center for Research on Utilization of Scientific Knowledge, 1970.

Havelock, R.G. Planning for innovation through dissemination and utilization of knowledge. Ann Arbor, MI: Center for Research on Utilization of Scientific Knowledge, 1973.

Heider, F. The psychology of interpersonal relations. New York: Wiley, 1958.

Hovland, C.I. & Weiss, W. The influence of source credibility on communication effectiveness. Public Opinion Quarterly. 1951, 15, 635-650.

Janis, I.L. & Gilmore, J.B. The influence of incentive conditions on the success of role playing in modifying attitudes. Journal of Personality and Social Psychology. 1965, 1, 17-27.

Janis, I.L. & King, B.T. The influence of role playing on opinion change. Journal of Abnormal and Social Psychology, 1954, 49, 214-218.

Janis, I.L. & Mann, L. A conflict-theory approach to attitude change and decision-making in A.G. Greenwald, et.al. (Eds) Psychological Foundations of Attitudes. New York: Academic Press, 1968, 327-360.

Johnson, D.W., & Neale, D. The effects of models, reference groups and social responsibility norms upon participation in prosocial action activities. Journal of Social Psychology, 1970, 81, 87-92.

Kanfer, F.H., & Goldstein, A.P. Helping people change. New York: Pergamon, 1975.

Katz, D. The functional approach to the study of attitudes. Public Opinion Quarterly, 1960, 24, 163-204.

Katz, D. & Stotland, E. A preliminary statement to a theory of attitude structure and change. In S. Koch (Ed.), Psychology: A study of a science. Vol. 3. New York: McGraw-Hill, 1959, 423-475.

Kelman, H.C. Attitude change as a function of response restriction. Human Relations, 1953, 6, 185-214.

King, B.T. and Janis, I.L. Comparison of the effectiveness of improvised versus non-improvised role playing in producing opinion changes. Human Relations, 1956, 9, 177-186.

Krech, D., Crutchfield, R.S. & Ballachey, E.L. Individual in Society. New York: McGraw-Hill, 1962.

Lemon, N. Attitudes and their Measurement. London: B.T. Batsford, 1977.

Lewin, K. Frontiers in group dynamics: Concept, method and reality in social science; Social equilibria and social change. Human Relations, 1947, 1(1), 5-41.

Lewin, K. Frontiers in group dynamics: II. Channels of group life; Social planning and action research. Human Relations, 1947, 1(2), 143-153.

Lippitt, R., Watson, J. & Westley, B. Planned Change, a comparative study of principles and techniques. New York: Harcourt, Brace, 1958.

Lott, A.J. & Lott, B.E. A learning theory approach to interpersonal attitudes in A.G. Greenwald, et.al. (Eds). Psychological Foundations of Attitudes. New York: Academic Press, 1968, 67-88.

Mann, D. Making Change Happen? Teachers College Record, 1976, 77, 313-322.

McGuire, W.J. & Papageorgis, D. Effectivness of forewarning in developing resistance to persuasion. Public Opinion Quarterly, 1962, 26, 24-34.

Osgood, G.E., Suci, G.J. & Tannenbaum, P.H. The Measurement of Meaning. Urbana, Illinois: University of Illinois Press, 1957.

Ostrom, T.M. & Upshaw, H.S. Psychological perspective and attitude change in A.G. Greenwald, et.al. (Eds). Psychological Foundations of Attitudes. New York: Academic Press, 1968, 217-242

Sarnoff, I. Psychoanalytic theory and social attitudes. Public Opinion Quarterly. 1960, 24, 251-279.

Sarnoff, I. & Katz, D. The motivational basis of attitude change. Journal of Abnormal and Social Psychology, 1973, 25, 419-427.

Scott, W.A. Attitude change by response reinforcement: Replication and extension. Sociometry. 1959, 22, 328-335.

Sherif, C.W. & Sherif, M. Attitude, Ego-Involvement and Change, New York: John Wiley, 1967.

Smith, M.B., Bruner, J.S. & White R.W. Opinions and personality. New York: John Wiley, 1956.

Spadafore, G.J. Cognitive dissonance paradigm: A technique to improve the effectiveness of the team approach. Psychological Report, 1976, 38, 1295-1299.

Staats, A.W. Social behaviorism and human motivation: Principles of the attitude-reinforcer-discrimination system in A.G. Greenwald, et.al. (Eds). Psychological Foundations of Attitudes. New York: Academic Press, 1968, 33-66.

Thurstone, L.L. The measurement of social attitudes. Journal of Abnormal and Social Psychology. 1931, 26, 249-269.

Watson, G., & Johnson, D.W. Social psychology: Issues and insights. Philadelphia: Lippincott, 1972.

Watts, W.A. & Holt, L.E. Persistence of opinion change induced under conditions of forewarning and distraction. Journal of Personality and Social Psychology, 1979, 37, 778-789.

Zimbardo, P. & Ebbesen, E.B. Influencing Attitudes and Changing Behavior. Reading, Mass: Addison-Wesley, 1969.

Zimbardo, P.G., Weisenberg, M., Firestone, I. and Levy, B. Communicator effectiveness in producing public conformity and private attitude change. Journal of Personality, 1965, 33, 233-256.